

IN THE CLAIMS:

In line 2 of claim 11, replace "concentration" with --relative concentrations--.

Cancel claims 14 and 16 and replace them with new claims 27 and 28, respectively:

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27. The method of claim 11 wherein said operation of matrix algebra is determining the inner product of two vectors V_i and W_i , and said method comprises:

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(i) obtaining for each vector V_i and W_i , sets of single-stranded oligomers E_i and \underline{E}_i representing the components of the vector, wherein the concentrations of the oligomers E_i and \underline{E}_i are proportional to the absolute values of the amplitudes of the components they represent; and also obtaining a set of single-stranded oligomers E_i and \underline{E}_i representing the components of vector W_i that are complementary to said oligomers representing vector W_i , wherein the relative concentrations of the oligomers representing \underline{W}_i are proportional to the concentrations of their complementary oligomers in W_i ,

(ii) combining samples of the oligomers representing vector V_i with samples of the oligomers representing vectors W_i and \underline{W}_i in separate reaction mixtures and measuring the rates of hybridization of said mixtures, and obtaining a numerical value proportional to the inner product of the two vectors from said rates of hybridization.

28. The method of claim 11 wherein said operation of matrix algebra is obtaining the inner product of a matrix and a vector, and

said method comprises

(a) obtaining a set of single-stranded oligomers representing matrix T , wherein each